



level, melting of Himalayan glaciers and also have been causing natural disasters like floods, landslide, cyclones and so on (Ahmad, Zayed & Harun, 2013; Devkota & Phuyal, 2015, 2017). It is found that the role of the banking sector is very crucial in growth and development activities and therefore, the banks must play significant role in mitigating the environmental degradation (Risal & Joshi, 2018). So, bank and financial institution embrace “green” initiatives for reducing carbon emission produce by their activities and contribute to the environment protection from their sides (Sharma et al. 2014).

Banks and financial institutional product might not be directly impact on the environment but the history of banks shows the heavy paper user industry. Historically, banks and financial institution only focused about the financial issues but the interested of public view makes concerned to ethical standards with changing demand (Chowdhury, Naim, & Hamid, 2018). The bank and financial institution feel pressure like other institution and green banking concept adopt by banks and financial institutions to promote environment friendly practices which include the usage of all resources adequately and avoid the wastage (Sahni & Dhamija, 2018). Financial institution involves in promoting green banking practices by implementing various forms of green banking services through their in-house operations and the wide range of financial products and services that they offer (Nisha, 2016). The bank play as an actor of environment change by adopt green banking concept such as using such instruments like online banking instead of branch banking, paying bills online instead of mailing them, providing different environmental-friendly bank schemes, opening up accounts at online banks, instead of multi- branch banks (Tandon & Setia, 2017).

There is different reason behind to go green bank and financial institution. The major reasons are the increasing general public expectation towards the environmental-friendly products and services and austere regulatory compliance requirements (Risal & Joshi, 2018). In the scenario of Nepal few research will be done on the issues of green banking practices and they find out that there is positive relation between green banking practices and banking environmental performance, because the banks environmental performance is accounted by green banking practices and but there is less known about the green banking towards their customers (Mehta & Sharma, 2016; Risal & Joshi, 2018). This study discussed on role of green banking concept how they fulfill the demand of the customers and control the emerging issue of environmental protection. As the importance of customers perception towards the adoption of green banking concept which is not studied. Therefore, a proper study is required to know the customers understanding level and view point towards the concept. So, this study

focused on the customers' perception towards the green banking concept initiatives by their banks.

In the context of Nepal, about green banking there are several questions has been emerged which needs to be answered like: What are the benefits of adopting green banking practices towards the customers? In which level customers are aware about the green banking initiatives in Nepal? What are the influencing factors that influence the customers to adoption of green banking practices? What are the perceptions of customers towards the green banking practices? What are the challenges that affect the customers who adopt the green banking practices? Thus, to explore these questions of green banking practices in Nepal the proper analysis is required. The purpose of this research is to address the above mention questions.

## **2. Environmental Perspective of Green Banking**

Nepal is though being late to aware about the global warming issue that refers for the global response due to which impact on the climate change and direct impact on the resources and human health. It rise because of the unethical behavior of the business organization so, general public demands that every business organization should take responsibility to protect and conservation of environment which is the result of going green concept. Environmental performance of any business can be identified by set of indicators as wastage minimization, prevention of pollution, recycling activities, efficiently use of scare resources (Lober, 1996). One of the organizations is banking and financial institution that needs to concern about the environment conservation and introduces the green banking concept that provides environmental friendly products and services to the banks customers. Green banking concept has a great contribution to the low carbon industries and transition to resources- efficient i.e. green economy and green industry (Saleena, 2014).

The state of environment in Nepal is rapidly deteriorating. The crucial part of environment degradation covers improper disposal of industrial wastage, deforestation, loss of biodiversity, encroachment of rivers, air, and land and water pollution and so on. In response to the above environmental degradation, financial sector in Nepal play important roles as one of the key stakeholders that contribute to protect the environment (Mehta & Sharma, 2016). Banking sector is one of the major sources of environmental pollution so; the prime responsibilities of banks should play a dynamic role to encouraging environmentally accountable investments and lending, use appropriate technologies and management systems (Masukujjaman & Aktar, 2013; Thombre, 2011). In this result bank and financial institution encourage to initiate green banking concept.

The main objective of green banking is to save the natural environment by using two ways, one is technological innovation in banking to deplete their negative environmental effect using online bills payment system instead of manual payment system, online banking instead of traditional banking system and another one is behavioral management innovations in banking practices to reduce negative environmental effect of the banks using environmental friendly initiatives of bank employees, waste reduction efforts of bank employees, energy saving behavior of bank staff in their respective branches, providing loans to the environmental friendly project and etc. (Shaumya & Arulrajah, 2016a and 2016b).

Nepal is far late to adoption of green banking concept in their banking and financial institutions activities than other countries. But the banks and financial institutions try to increase their green concept in banking activities and work on to aware to their customers for use environment –friendly products and services and contribute to environment protection of Nepal. There are numerous challenges in adapting and adopting Green Economy policies in a poor country like Nepal. Capacity and skill development, technology adaptation, transfer, and retrofitting to suit Nepal's hilly and mountainous terrains, need for huge investment in processing and value addition, and of course adapting to and militating against climate change are some of the major challenges. Notwithstanding these constraints, green economic policies and programs can be means to achieve sustainable development in the mountainous region.

### **3. Green Banking Initiatives**

Green banking is the banking activities that give special concern to environment, social and ecological factors which purpose to protect nature and natural resources to save environment (Chowdhury & Dey, 2016). Menon et al. (2017) states that around 1970's has green economy concept but after the monetary recession of 2009 it will be relevance, and government support the green banking which represents as the process of leading the banking operations in a way that benefits the overall decrease in the external carbon emission and internal carbon footprints from bank's internal and external functions by financing in green technology project that reduces the pollution. The first green bank was based in Mt. Dora, Florida, United States (Jayabal & Soundarya, 2017).

However, in the context of Nepal Laxmi Bank was the pioneer bank for initiating green banking strategies in Nepal which attention on digitization basically through two core services namely mobile money service and internet banking to avoids customer-counter delay and provides access to easy finance, and the Clean Energy Development Bank and

Sanima Bank encourage in hydropower investment, solar energy development funds to reduce the energy (Mehta & Sharma, 2016).

Now a days, every banking and financial institutions of Nepal try to adopt green banking concept in their banking activities through convert the manual activities into computerize, provides services like balance enquiry, check balance statement, fund transfer and deposit, opening and closing account via using online and also investing such project which is green concept and provide loan at low level interest rate for green project (Risal & Joshi, 2018).

#### **4. Green Banking Advantages**

Banks hold a distinctive position in an economic system that can impact in business, production and other economic activities through financing their activities (Chowdhury et.al, 2018). To protect environment green banking practices helps to reduces external carbon emission as well as internal carbon footprint. Control external carbon emission by investing and provide loan such projects and company who adopt green concept and on the other hand, reduce internal carbon footprint like lighting, air conditioning, electronic equipments, high paper wastage through the use of renewable energy which results less to cut trees and reduce environment pollution (Ko et al, 2012) .

To the customers it helps to reduce wastage from their lives by eliminating paper wastage and also makes their life easier and more secure with online banking by providing facilities like balance enquiry, check balance statement, fund transfer and deposit, opening and closing account and easy-to-access location for prevent identity theft(Wessel & Drennan, 2010). Similarly, it saves time and money through rather than heading to the bank every banking related activity done through mobile or electronically where you are and saves your valuable time and money by reducing amount of gas use on those numerous trips to bank for the banking activities (Sahni & Dhamija, 2018). Likewise, it also helps to online payment services it will avoiding late payments and save the fines.

To banks green banking offers the insubstantial benefits include increased goodwill and reputation, customers' loyalty, positive effects on the environment on the environment and simplicity of bank process which is more than monetary benefits (Vijay & Natarajan, 2015). It also helps to make aware corporate about their social responsibility & environmental activities and maintain their ethical standards (Manzano et al., 2009).

## 5. Green Banking Theories and Empirical Reviews

In this study, different theories related to green banking have been used namely, Equator principles, Typology and Customer satisfaction model. Equator principle introduced with an aim for assessment, determining and management of environmental and social risk in the process of project financing it is relevance for the study of green banking because the concept of green banking is adopted by the bank to minimize environment problem by conserving the scarce resources. Similarly, typology model include four stages of banking defensive banking, preventive banking, aggressive banking and sustainable banking which is generally every bank follows these stages (Bouma et al., 2001). Likewise, customer satisfaction model states that there is relationship between the customers' satisfaction and features of the green banking where the dependent variables is customers' satisfaction and independent variables are security and trust, ease of use, value creation, environment and social concern (Shampa & Jobaid, 2017).

Based on the theories, some of the empirical reviews available in green banking are as follows:

**Table 1: Studies on Green Banking Practices**

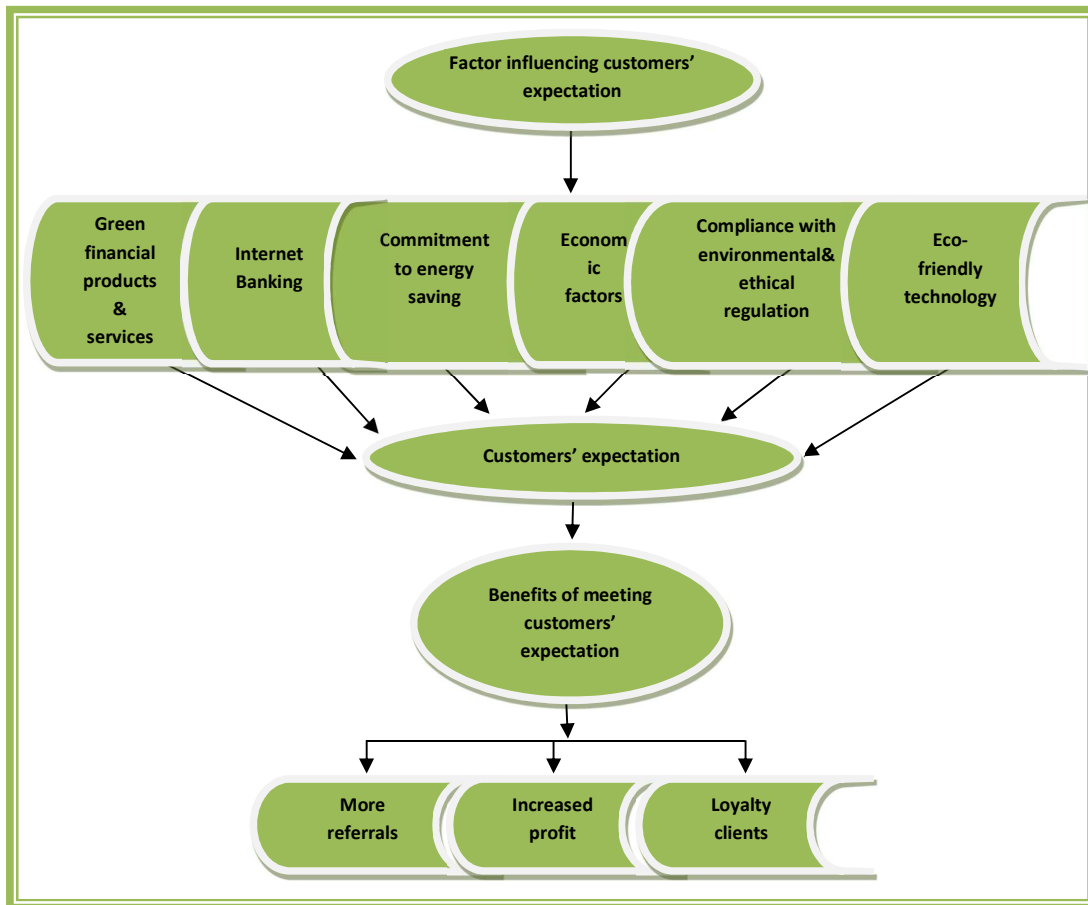
Authors	Country	Major findings	Conclusion / Recommendation
Dixit & Datta (1970)	Indian	customer concern level towards the privacy and security issues	Need to organize the conference and seminar to provide the basic knowledge
Sathye (1999)	Australia	Major obstacles are security concern, resistance to change, lack of awareness and its benefits	Focus on the major issues which find by study and also the makes the delivery of financial services over the Internet as a part of overall customer service and distribution strategy.
Gerrard & Cunningham (2003)	Singapore	Compatibility, complexity, convenience, confidentiality, accessibility, innovativeness, proficiency, economic benefits, social desirability which influenced the rate of adoption.	Concerned about the confidentiality and accessibility so, focus on more secured and accessible.
Polasik & wisniewski (2009)	Poland	Less awareness of benefits	Encourage customers to use this cost-effective distribution channel through carefully-planned actions

Chong et al. (2010)	Vietnam	perceived usefulness, perceived ease of use, trust and government support factors that affect in adoption	Improve the security and privacy of the web sites
Ko et al. (2012)	South America	personality traits of individual bank customer can be a significant contributor influencing Internet banking usage	Individual characteristics should also be considered for successful Internet banking design and implementation
Sharma et al. (2014)	India	Lack of awareness of Customers is less known about green banking concept	Still major issue need to identify sustain and development of green banking concept in customers.
Vijai & Natarajan (2015)	Cuddalore district	Need to awareness of green banking practices	Improving the scope of green banking seminars, workshops and public meetings should be organized to provide knowledge for the proper use of green practices and aware
Iqbal et al. (2016)	Bangladesh	Significant relationship with responsiveness, reliability, empathy, privacy and information quality	Observed behavior intention of customers
Mehta & Sharma (2016)	Nepal	Even young generation and middle age people are not aware about green banking practices	Both bank and government play a role to amplify the awareness level of customers.
Pariag-maraye et al. (2017)	Mauritius	Capital gains, time saving and contribution towards environmental protection are benefits for customers.	Banks has obligation towards their customers promote the benefits of green banking practices
Risal & Joshi (2018)	Nepal	Positive relation between green banking practices and banking environmental performance	Banks and government should play the role of motivate and awareness about the green banking benefit
Pillai & Raj (2019)	Kerala	Still not fully persuade the customers to adopt green banking practices.	Necessary to inform the advantage of being green to their customers.
Herath & Herath (2019)	Sirlanka	Features of green banking initiatives security & trust, value creation, environmental& social concern and ease of use are influenced on the customer satisfaction	Bank should know the various features which influence the customers to adoption of green banking products

## 6. Conceptual Framework

The study assumes that it is required for understanding the factors that influence in adoption of green banking practices. Significant research studies have access to determine the key forces behind the adoption of green banking practices such as (Islam et al., 2014; Biswas, 2011) and Ahmad et al. (2013). The customer satisfaction and expectation will be different as per their experience perceived from the organization and attitudes towards the products Ankit (2011), Parasuraman (1991) states that understanding customer expectation is required for every organization because customers always make a comparative analysis between the perception and services performance.

**Figure 1: Framework for Green Banking Expectation**



*Source: Modified from Shampa & Jobaid (2017)*



To understand the customer expectation, the organization need to know about what customers really want from a product and services if the service is below the minimum expectation level customer expectation will not meet and if the service exceeds than desired service they were satisfied Zeithaml (2013). Nowadays, customers expect cashless activities and 24hour access to electronic banking so, green banking offers the e-cards, internet banking, ATMs) (Shampa & Jobaid, 2017). As a solution of global warming customers like the idea of saving energy, for this bank make their infrastructure environment-friendly by using laptops, desktops computers, resource efficient environmentally responsible green building to meet customers expectation IDRBT (2013). Customer expects their banks & financial institution will use eco-friendly technology bank adopts eco-friendly technology for energy efficiency & resources utilization by using solar powered branches, eco-friendly ATMs & use of less power consuming device will reduce carbon foot prints& render a clear image about banks green bank initiatives (Sabharwal, 2013).

Every bank, which have environment directed guidelines which they can increase green concern among stakeholders, customers anticipate that the financial institution will endorse by the guidelines (Islam et al., 2014). The advantage from this is that it identifies customers understanding on green banking and the measure factors associated with green banking practices among customers for identify proper management strategy for effective green banking practices. And it also shows the benefits to the banks by increase loyal clients, increased profits and more referrals from the customers.

Several studies have been conducted in abroad and many countries have initiated their study focusing green banking. However, in the context of Nepal only few researches is available on green banking practices which clearly explores on the effect of green banking practices on bank's environmental performance among Nepalese commercial banks (Mehta & Sharma, 2016). Similarly, Risal & Joshi (2018) assess on the overall understanding of the customers regarding Green Banking initiatives and practices followed by banks in Nepal but have not tries to identify the factors that influence in customer expectation and usage of green banking products. Hence it is still the area of interest for the bankers and researchers.

## **7. Discussion**

The revolution phase of financial eco-system all over the world, Nepal seems quite far from the global trend to promote green banking initiatives (Mehta & Sharma, 2016). Due to increase open and competitive framework has been formed the banking business has undergone changes in the regulation of the sector, in which many financial entities

are beginning to be concerned to develop defensive strategies in order to avoid in discriminate loss of customers by create the value to customer through changes in consumers' demand for services, technological changes to maintaining and long term relationships in order to benefits from customers' loyalty and participation (Carlos et al., 2006). Consumers interested on environmental-friendly goods and services and higher expectations by the public on Bank's environmental responsibilities is the reason behind going green financial institution (Sharma et al., 2014). Green Banking is environment friendly practices which help to reduce internal and external carbon footprints to makes technological &operational improvements and changing client usage in the banking sector (Jayabal & Soudarya, 2017).

If the banks adopt or improve the quality dimension like responsiveness, reliability, empathy, and privacy and information of their green banking services in order to achieve customer service satisfaction it will result in increased growth rate in the use of green banking service (Iqbal et al., 2016). To adoption of green banking service are affected by the issues like lack of awareness of green banking services, data security, and other technical issues, preference for face-to-face transaction, lack of knowledge about transferring online, lack of user friendliness, value creation, environmental& social concern and ease of use (Sahni & Dhamija 2018). Similarly, these issues influenced the customers' satisfaction and usage of green banking products depends on the customer satisfaction level by adoption of green banking products and it depends on the various features of green banking initiatives. So, bank should know the various features which influence the customers to adoption of green banking products (Herath & Herath, 2019).

## **8. Conclusion**

Different view point will be known through little research on related studies with the help of reviewed literature on green banking practices. In the scenario of Nepal, the adoption of green banking concept in banking and financial institution is late than other countries. Few years back Nepal bank and financial institution adopt the green banking concept and few research have done on these issues and they find out that the green banking concept is in initial phase and few banks work on it. Various studies found that customers are less aware about the green banking concept adopt by their banks and their positive perception towards the green banking concept. The review of literature shows that although the increasing concern for the green banking practices around the globe, but in the context of Nepal only few researchers can work on it so, there seems to be research loopholes in this area. The review of literature identified that there is required

the further research in Nepal in the context of green banking. Specially, in the issue of perception of customers towards the green banking practices initiatives by their which helps to know the factors that affect the customers to adopt the green banking. There are absolutely no studies that have sought to understand the various factors that influence customer's attitude or behavioral intention to adopt green banking practices. It indicates that perception of customers is important to implement green banking concept and this issue needs to explore.

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